

PATENT ABSTRACTS OF JAPAN

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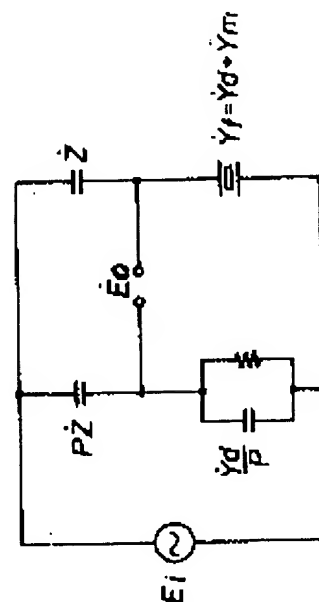
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(54) INK DETECTOR FOR INK JET RECORDER

(57)Abstract:

PURPOSE: To clearly detect the existence of an ink by electrically excite an electroacoustic transducer element installed inside an ink tank, etc. and detecting a change of the dynamic impedance of load.

CONSTITUTION: The damping admittance of a vibrator is Y_d , and the dynamic admittance Y_m . Then a sufficiently high circuit constant P is selected. The output voltage E_o of bridge circuit represents a value proportional to vibration speed v according to a publicly known formula. If power supply voltage E_i is now kept constant, it is possible to detect a change the acoustic impedance of load passed on a change of output voltage E_o . Thus it can be distinguished whether a liquid or air is touching a vibration plate. Consequently, the faulty case such as seen in the past does not occur that the existence of ink can hardly be determined due to the fouling of a transparent window.



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